

CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

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SECURITY INFORMATION

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MANAGEMENT AT DEVELOPMENT PLANT NO. 2

General Characteristics

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1. [REDACTED] Development Plant No. 2 (Opytnyy Zavod No. 2) of the Ministry of Aviation Industry, located at Upravlencheskiy, Kuybyshev Oblast. This plant was engaged in the development of jet-propulsion engines, and in the establishment of production methods which could be adopted in serial-production plants. Plant No. 2 was not engaged in serial production. It was under the immediate supervision of a deputy minister in the Ministry of Aviation Industry.
 2. Inspection commissions and the auditing of plan fulfillment reports were the principal means by which the Ministry of Aviation Industry (hereafter called the Ministry of Aviation in this report) supervised the progress of operations at Plant No. 2. Each year the ministry dispatched an inspection commission to make an on-the-spot check of activities at the Upravlencheskiy plant. It is also interesting to note that the USSR Council of Ministers also dispatched an inspection team to the plant annually. According to my Soviet colleagues,

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the Council of Ministers appointed a committee for the direct inspection of such key projects and enterprises as canals, hydroelectric plants, and development plants. This inspection commission, which visited Plant No. 2, consisted of five or six men, including a chairman, technical, organizational, and finance inspectors; and an inspector representing air force interests.

3. The most recent director of Plant No. 2, a man by the name of Kuznetsov, was undisputed boss of the enterprise, enjoying so-called "one-man responsibility". He was simultaneously chief designer of the plant and thus was in charge of the Designing Office. It should be noted that in all Soviet aircraft development plants the chief designer is automatically technical director of the enterprise. A plant director who is not simultaneously chief designer is only the administrative chief of operations.
4. Development Plant No. 2 consisted of three main functional divisions: a Designing Office (Konstruktionsbuero), headed by the Chief Designer, the Testing Installations (Versuchsanstalt), under the direction of the chief metallurgist, and the Workshops (Werkstaette), headed by the chief engineer.

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5. The organization of Plant No. 2 also included certain important administrative offices and personnel. Perhaps foremost in importance was the local Party Committee headed by the Party Secretary. Then there was the business director of the plant who held the title of Assistant to the Director for Administrative Affairs. The chief bookkeeper, a subordinate of the business director, was apparently under the functional control of the Ministry of Finance, and not the Ministry of Aviation.
6. Section 3, the Planning Office, may also have been under the functional control of a central agency other than the Ministry of Aviation. It reported on plan-fulfillment progress, not only to the Ministry of Aviation, but also to the State Planning Commission. The Technical Control Section, or OTK (Otdel Tekhnicheskii Kontrol), was another section under the direct functional supervision of a ministry other than the Ministry of Aviation. Concerned with enforcing standards of efficiency and accuracy, it reported to a central ministry or agency responsible for such matters. And finally, the personnel section of Plant No. 2 was under the functional supervision of the MVD. The Chief of the personnel section was an MVD officer and received his instructions directly from that ministry.
7. The Security Section, or Section 1, was responsible for the control and safeguarding of all classified documents. Classified material received by the plant was sent directly by courier to this office, which in turn transmitted the material to the director or others concerned. Although not certain on this point, I assumed that this section, too, came under the control of an outside ministry or agency, as security sections are organized along the same lines in all other Soviet plants. On the other hand, it is possible that each industrial ministry had its own chief directorate thus devoted to security matters, since only specialized ministries would be in a position to determine which technical material should be classified.
8. I might note at this point that all Soviet plants have the same organization and designation for certain basic administrative offices. For example, Security sections are always referred to as "Section 1" (Pervyy Otdel), Planning sections are always referred to as "Section 3" (Tretiy Otdel), and Procurement sections are designated as "Section 2" (Vtoroy Otdel).

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Planning Procedures

9. The annual plans which defined the operations of Plant No. 2 originated with the Politburo. [redacted] the Politburo. 25X1X established the general strategic requirements of the USSR. For example, it determined that Soviet industry must produce a certain number of jet-propelled aircraft of a given performance standard, superior in number and performance to those currently produced by Western nations.
10. These requirements were passed on to the Ministry of Aviation, which determined the earliest dates for the achievement of these production goals. If these requirements called for development of a new plane, aircraft designers in the ministry developed technical specifications and plans and passed them on to the Council of Ministers as specific projects.
11. The Council of Ministers discussed and approved these projects and established their total cost, as well as final completion dates. Total costs were held to include wages and salaries, raw materials, other purchases, and bonuses. I should emphasize that the Council of Ministers did not deliberate on the production plans for enterprises engaged in serial production, but only considered key projects such as large public works or experimental aircraft.
12. A project was then returned approved to the Ministry of Aviation, which submitted it to the various aircraft development plants for bids. Such a project was treated as a contract, and the directors of the various plants engaged in aircraft development were forced to compete for it. In cases applicable to Plant No. 2, the directors of the various plants engaged in developing aircraft engines (in my opinion there were at least six such plants in the USSR) were called to Moscow, where the terms of the project were read to them. A director was then given a brief period to check on possibilities within his plant before submitting his bid.
13. The plant director who made the best offer in terms of production time and costs usually received the assignment. In other cases, a project was awarded to two development plants, which then carried out parallel operations. In the case of several contracts awarded to Plant No. 2, this bidding was probably a mere formality, as the projects had definitely been drawn up specifically for this enterprise.
14. The Soviet economic apparatus has laid down the general rule that a director of such an enterprise as Plant No. 2 is never forced to take an assignment from his supervising ministry, but, rather, is obliged to compete for such projects. The idea is that each person engaged in industry, including plant directors, has to assume a personal obligation and not simply receive an order. It is felt that this principle stimulates efficiency and initiative on the part of plant directors. Failure of a director to obtain orders or contracts for his plant would mean that he would lose his job. The plant could even be closed if it were so inefficient as to be not viable. This, of course, was a rather limited form of competition, as perhaps only six enterprises in the USSR were engaged in developing aircraft engines. Furthermore, not all of them were equally suited to take on the same tasks.
15. The Planning Office of Plant No. 2 took over after a project had been assigned to it by the Ministry of Aviation. It drew up individual plans for the various sections in conformity with the original final completion date set by the Council of Ministers. On the basis of its plan, a section drew up assignments or plans for each individual worker. Individual sections reported on the monthly fulfillment of their plans to the Planning Office, which in turn submitted plan fulfillment reports for the entire plant to a higher agency. I believe that it reported to

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a Planning Office within the Ministry of Aviation, and to the State Planning Commission as well, a situation which probably applied only to enterprises engaged in development work and other special projects.

16. The Planning Office was mainly responsible for supervising the fulfillment of plans by individual sections within Plant No. 2. The Party Committee also played an important role in controlling plan fulfillment but generally only entered the picture when a shop or section was falling behind in its work. The Party secretary continually checked on current production in order to determine weak points in the plant's operation. He reported such cases to the director and they presumably worked out corrective measures together. Often this took the form of an on-the-spot investigation of causes of failure by the Party secretary, which were followed by shop meetings designed to correct the production shortcomings.
17. Section or shop chiefs did not usually falsify reports in the event of failure to fulfill monthly plans. However, it was true, of course, that when the plant as a whole or an individual section failed to meet its production schedule, it would always make excuses in its report and would attempt to place the blame elsewhere.
18. On the whole, the planning system had an extremely favorable influence on the efficiency of operations at Plant No. 2. Some jobs were completed there in one-third of the time required for comparable operations in a German plant. This was possible only because planned operations provided for more efficient use of man-hours and eliminated extraneous production activities. For example, it is not at all uncommon in a German aircraft plant that five or six draft designs of a new engine are prepared, an operation which often lasts an entire year. Designs for a new engine were often completed within two weeks at Plant No. 2, and the prototype engine was ready for mass production in three or four months. A properly drawn-up plan provides every last worker with a specific assignment, gives everyone an incentive to work. In the last analysis, it is a control instrument which prevents idling and cuts down on wasted man-hours.
19. Soviet planning methods had, of course, their drawbacks, but these were far outweighed by positive effects. The time allotted for a given operation was always too short, and we never met our original production schedules. This factor exerted a certain pressure on the engineers and workers at Plant No. 2, which sometimes led to hasty and inaccurate work. Usually this presented no unsurmountable problem, as additional time for projects was granted if reasonable explanations were presented.
20. Incidentally, it was impossible to argue about the over-optimism of original production schedules with our Soviet administrators, no matter how unrealistic the plans may have been. [redacted] Soviet engineers always replied that it was impossible to say beforehand whether or not a completion date for a new project could be met. To doubt its feasibility, they said, demonstrates nothing more than an unwillingness to work, and this means sabotage. 25X1X 25X1X
21. [redacted] Soviet colleagues were the sources of my information concerning Politburo functions in industrial planning. They were aware of these activities as a result of earlier employment in Moscow in the Ministry of Aviation. A German aircraft designer, formerly chief designer of Plant No. 2, was the source of my information concerning bids for production contracts. I should note that, before Kuznetsov became plant director, a German served as chief designer and a Soviet as director. Under this arrangement, both the German chief designer and the Soviet director were required to sign contracts received from the Ministry of Aviation.

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Managerial Personnel

22. The chief professional shortcoming of Soviet aviation engineers was their over-specialization. This is a direct result of the type of training offered at Soviet technical universities and institutes. Soviet administrators maintain that they need engineers who are highly qualified in one field of specialization and not engineers who know a little about everything but nothing very well. It is the German point of view that university training should provide an engineer with a thorough but broad technical background, and that specialization in a given line of engineering will develop in the course of a man's career.
23. As the result of this educational policy, Soviet engineers at Plant No. 2 possessed no over-all picture of activities there. If an engine broke down while undergoing tests, the Soviet engineer in charge could seldom ascertain the causes, as they were generally beyond his narrow field of specialization. In such a case, the Soviets would generally form a "collegium" of seven or eight specialists who were only able to decide what was wrong after pooling their knowledge and after hours of discussion. Designing was another weak side of Soviet engineers. Despite their engineering training, most Soviet designers were in reality nothing more than simple draftsmen.
24. In general, one can characterize Soviet engineers as good in theory but weak in practice. The postwar Soviet aviation industry has achieved success in some fields, but this has been derived only from information obtained from German specialists employed in the USSR, Western technical literature, and prototypes obtained by their purchasing agents in neutral countries such as Sweden. In fact, the skill of Soviet aviation engineers in improving and copying Western aircraft developments is one of their most commendable technical qualities. Another strong point of Soviet aviation engineers is their excellence in mathematics.
25. By way of illustration, let us consider Kuznetsov, the chief designer and director of Plant No. 2 [redacted] Kuznetsov was an engineer by profession and held the rank of colonel in the Soviet Air Force. He was a Party member, a man in his middle 40's. Before assuming the positions of director and chief designer, he had been chief of an office in Plant No. 2 engaged in designing aircraft engines.
26. Kuznetsov was the most skilled of the Soviet engineers at the plant. He was technically qualified for his position to the degree that he was capable of evaluating suggestions made by German designers, of selecting out the best of several suggestions, and of correcting mistakes in these suggestions. But he was incapable of bringing forth any new idea of his own in respect to aircraft engine designs which met the requirements set by the aviation ministry. He tried to do this on several occasions but only failed in these attempts. In general, he relied on the technical initiative of German designers, especially Engineer Prestel. In fact, the plant fulfilled the requirements of the Ministry of Aviation only because Kuznetsov was willing to give his approval to suggestions made by leading German engineers there.
27. I was unaware of any particular social tension between the Soviet workers and intelligentsia at Plant No. 2. Soviet workers displayed no general dislike of their supervisors as a group. Some were considered "good guys", some not, just as in any German factory. For one thing, some workers, particularly Party members, were often given jobs which enabled them to earn as much as many engineers. This fact tended to alleviate any abnormal envy of well-paid managerial personnel on the part of the workers.
28. Soviet managerial personnel, for their part, had an entirely normal attitude toward the Soviet working class. Their attitudes in this matter were no different than the opinions held by their German or American counterparts. They demonstrated neither over-respect nor disrespect for the working class in any particular manner or attitude.

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Soviet Working Class

29. I would characterize the average Soviet skilled worker as a mediocre craftsman. There were some highly capable workers employed at the plant, but they were exceptions rather than the rule. The typical worker had had little formal training in his trade other than initial on-the-job training, which lasted from six weeks to three months. Those workers who completed this brief period of apprenticeship immediately took their place among other, more experienced workers in their trade and were forced to compete with them. Those who failed to meet their norms, who could not make the grade, were demoted to jobs calling for unskilled labor. A few outstanding workers were selected out of those who remained and were given further vocational training.
30. The average Soviet worker was reliable in his work, as regulations required him to pay for any faulty production or breakage for which he could be held responsible. In fact, the first thing they learned was to be careful. However, any enthusiasm for their work, any particular interest in doing a good job, was entirely lacking.
31. Various forms of "socialist competition" were put into practice at Plant No. 2. Most common were contests drawn up between two sections, each pledging itself to outdo the other in overfulfilling its production plan or in cutting down costs. These contests were sometimes carried to ridiculous extremes. [redacted] engineers employed in the Designing Office once had a competition with the charwomen who cleaned our offices. The engineers were supposed to cut down operating costs by 10 percent, economizing in the use of paper and pencils, while the charwomen were called upon to reduce their costs in a similar amount by using fewer rags and less soap.
32. "Socialist obligations" was another work method designed to promote efficiency. Individual workers and brigades signed contracts or obligations pledging themselves to cut down on costs or speed up production by certain specified amounts. And, finally, plant managers resorted to personal acclaim in order to stimulate efficiency. One or two workers in each shop were singled out each month for their outstanding achievements and were honored by special publicity and an extra bonus.
33. These measures were generally taken seriously by Soviet workers and employees and were carried out in good faith. They tended to achieve their desired effect, of greater efficiency and a speed-up in production.

LABOR AND WORKING CONDITIONS AT PLANT NO. 2Salaries and Wages

34. Soviet industry follows the basic principle that everyone (other than those paid on a piecework basis) who fulfills or overfulfills his production plan is eligible to receive a bonus. Theoretically, every project assigned to Plant No. 2 included a specific sum set aside for bonuses, which was distributed in the event that the project was completed on schedule or ahead of time.
35. Let us assume for the sake of example that 1,000,000 rubles were set aside for bonuses for a certain project. This was no guarantee, however, that the total amount would be received by workers and employees in the plant, nor did it mean that the entire fund was distributed at one time. This sum was divided up according to the various production stages, perhaps 300,000 rubles for the Designing Office, 200,000 rubles for testing, and 300,000 rubles for the production of parts. If the project was completed on time in all its phases, but if, for example, only the Designing Office met its schedules, then only 300,000 rubles were released. Furthermore, bonus funds were not only distributed on the final completion of the project but were released on a current, monthly

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basis as each specific production process was completed. For example, if a workshop completed on time the production of a certain set of parts needed in an experimental engine, the plant would notify the contracting agency, normally the Ministry of Aviation, of this fact, and it would release perhaps 40,000 rubles for distribution.

36. Designers in the Designing Office who received a bonus for fulfilling a project on time also obtained this premium on a piecemeal basis. Twenty-five percent of the funds set aside as bonuses for a specific project was released upon completion of preliminary calculations and designs, 25 percent was distributed when the engine was first tested, and the remaining 50 percent was distributed on the successful completion of the final official test run (Staatslauf).
37. Most production workers received no bonuses, as they were paid in accordance with norm fulfillment. However, all other workers and employees in a workshop not paid on a piecework basis (the shop chief, engineers, foremen, and workers receiving fixed salaries) received bonuses when they were distributed. Bonuses were allotted to the shop as a whole and not to individual workers. Final distribution was either determined by the shop chief alone or, with his approval, by a shop meeting. In the latter case, the workers in the shop usually elected a committee which determined individual shares according to individual contribution.
38. It should be noted that, of the total sum of money allotted to the plant as bonuses for the successful fulfillment of a contract, about 10 percent was set aside for the chief designer, 5 percent for the plant director, and 3 percent for the chief engineer. The remaining amount was distributed among other employees and workers in the manner described above. 25X1X
39. Bonuses were seldom received [redacted] at Plant No. 2, presumably because of the difficulties encountered in initiating operations there. Later, after production problems had been ironed out and the plant received numerous easily-fulfilled contracts from other plants or agencies, almost all engineers and designers received bonuses on a monthly basis. [redacted] 25X1X
[redacted] I have heard that, during 1951 and 1952, most engineers and designers received monthly bonuses amounting to 50 percent of their basic salaries and section chiefs were awarded monthly bonuses amounting to perhaps 75 percent or 100 percent of their basic salaries.
40. Production norms for workers paid on a piecework basis were continuously checked and revised upwards during the years from 1946 to 1950. When we first started operations in 1946-47, most German workers could fulfill their daily norms in a matter of four hours. But, during the last months [redacted] perhaps one-third of these workers were falling short of their daily quotas. 25X1X
41. In theory, production norms were supposed to conform to the output of an average worker engaged in a specific type of work. As a result, norms were constantly increased if a shop continued to overfulfill its monthly plans. Furthermore, many ambitious shop chiefs forced norms upwards because of their desire to obtain greater efficiency. This was especially true when two or more workshops were engaged in a socialist competition to determine, for example, which shop could produce parts for a certain engine in the least time.
42. Production norms for certain very basic items, for example, a screw, were fixed according to nation-wide standards. Otherwise, they were very elastic. Responsibility for establishing non-standard norms was divided between the Technological Section and each individual workshop. The responsibilities of the Technological Section were two-fold. The tekhnolog assigned there received from the plant management a work order for a specific workshop and broke it down into individual work assignments. This schedule was then turned over to the kalkulator

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assigned there, who fixed the norm for each work assignment. That is, he established the time required for each production process. In addition, the kalkulator assigned to each shop constantly checked on-the-spot fulfillment of these norms. He was authorized to lower or increase norms if they were found to be out of line with the efforts of average workers.

43. It was my understanding that salaries and wages in a development plant were higher than those paid in plants engaged in serial production. Soviet skilled workers who fulfilled their norms by 100 percent received from 800 to 1,200 rubles per month. A few, particularly Party members assigned to easy jobs, were able to earn as much as 2,000 rubles a month by greatly exceeding production quotas. Foremen generally received about 1,200 rubles per month and supervisory foremen 1,400 to 1,600 rubles per month, plus bonuses. The salaries of Soviet engineers varied in accordance with professional experience. They received from 1,200 to 1,900 rubles per month, plus bonuses. The average Soviet section or shop chief received a salary of 2,500 rubles per month, plus bonuses.

Mobility of Labor

44. Soviet workers and lower-grade technicians at Plant No. 2 were evidently not restricted in their employment mobility. They apparently had obtained employment at Plant No. 2 on their own initiative and not upon order of some government agency and were free to take up employment elsewhere when they wished.
45. Engineers and other employees in positions of equal responsibility, however, were restricted in their freedom to choose their place of employment. Graduate engineers who had attended a university or institute with the support of a State scholarship were required to serve for a period of five years after graduation at a post designated by the Ministry of Aviation. Not only that, these young engineers had to pay to the government 20 percent of their salary during this five-year period in order to repay scholarships which they had received.
46. All Soviet engineers at Upravlencheskiy signed contracts when initially employed there which required them to remain at Plant No. 2 for at least two years. It was possible for them to obtain employment elsewhere after completion of this contract period either by receiving an appropriate order from the Ministry of Aviation or on their own initiative. The latter step was by no means simple, as an engineer had to obtain the permission of both the plant director and the Ministry of Aviation for such a move. It should be noted, however, that most Soviet engineers were pleased to be assigned to Plant No. 2. Being a development plant, assignment there meant a step forward in a career, as well as more pay.
47. Many Soviet engineers and designers left the plant during my period of employment there. I assumed that they were transferred by order of the ministry and not as the result of personal initiative.


MVD ACTIVITIES AT PLANT NO. 2

48. The Personnel Section at Plant No. 2 received administrative instructions from the Plant Director but the functional directives from the MVD. It was, in fact, a local agency of the MVD, directed by an MVD officer, Major Kolychenko. The source had never heard of the term "MGB" while in the USSR.
49. This office carried out the normal functions of a personnel section, as well as those of a security agency. It maintained personnel files on each employee which included standard personnel data as well as any detrimental reports on an individual's professional and political activities. The Personnel Section also handled certain requests or complaints of the German employees at Plant No. 2. For example, we were required to obtain permission and, in the early years, a "guide", from this office whenever we wished to visit Kuybyshev or other localities outside of Upravlencheskiy.

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50. Major Kolychenko appeared in a uniform as well as in civilian clothes, when on the job. This uniform, the same color as standard Soviet army uniforms, was distinguished by silver shoulder boards bordered by blue piping. He wore a visor cap, the same color as the uniform, with either a blue or red band around it. I recall that Kolychenko previously had worn a different type of uniform, but my memory fails me in trying to describe it.
51. The guard detachment at Plant No. 2 and probably the Fire Department were subordinate to the Personnel Department and received direct orders from Kolychenko.
52. An investigative office at Plant No. 2, referred to by both Soviet and German employees as "the MVD office", was evidently responsible for maintaining political and economic security at the plant. This office operated entirely independently from the plant administration. Its personnel consisted of three or four male employees who must have had previous service in Germany, to judge from their flawless German.
53. The office reputedly supervised the operations of MVD informers within the plant. At least 10 percent of all workers and employees, both German and Soviet, were in the service of the MVD. The identity of most informers in the Designing Office was a known fact among other employees there. Inasmuch as these informers were not particularly objectionable on any other personal or political criterion, I assumed that most of them had not volunteered for this work but were under some moral obligation to do so.
54. 
55. Although the Soviet engineers in the Designing Office never mentioned a word about the MVD, they became very excited whenever an MVD investigator appeared in the office or whenever someone was called in for an interrogation. They obviously regarded the MVD with great fear and respect.
56. Nevertheless, I do not believe that this oppressive cloud which hung over our heads lessened the efficiency of operations at Plant No. 2. Indeed, the opposite was true, as this office was empowered to uncover technical as well as political shortcomings. This proved helpful in correcting and curtailing production efforts. The MVD investigators--they had free access to every section in the plant--not only checked up on major breakdowns but also minor production problems. For example, whenever faulty production recurred in a given section, the investigators appeared on the scene in order to determine the cause of the trouble.
57. As mentioned earlier, Section 1 was also responsible for the maintenance of security at Plant No. 2 and accordingly might have been under the jurisdiction of the MVD.
58. We Germans were amazed at the ingenious, almost foolproof system of personal identification which the Soviets had instituted at Plant No. 2. Every worker and employee was issued a plant pass which included a picture of the pass holder and his identification number. An employee picked up his pass at the outer gate when arriving at work and turned it in to his section's timekeeper when he entered his office or shop. The timekeeper checked off the employee's number if he were on time and locked up the pass. If the employee had to visit another section on business, he obtained his pass when checking out with the timekeeper, as he was required to present it when entering and leaving each building. In this way, plant authorities were informed on the exact movements of all employees and made sure that no unauthorized persons could roam about inside the plant compound.

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59. This pass system also was a method of controlling tardiness. Any employee who reported late to work did not receive his pass at the gate but simply a notice for his section's timekeeper. The timekeeper was then required to pick up the pass at the gate in order that she would have no excuse for failing to mark the employee as late to work.

PARTY ACTIVITIES AT PLANT NO. 2

60. Most Soviet Party members at Plant No. 2 occupied leading positions and, conversely, most persons in positions of responsibility were members of the Party. For example, all of the 35 Soviet engineers employed in the Designing Office were Party members, as well as all but two of the engineers and technicians employed in the Testing Section.
61. There are several explanations for this high percentage of Party members. For one thing, it is clear that the engineers who were assigned to work with the German specialists in the Designing Office had been carefully screened for this work, which demanded the utmost reliability. Secondly, Soviet authorities would certainly not allow unreliable elements to work side by side with the German specialists, as they could be expected to inform the Germans that all was not well in the Soviet Union. And finally, Soviet engineers were undoubtedly required to report on the political attitudes and personal movements of their German colleagues. All these factors would call for the employment of Party members in these positions.
62. To judge from their statements to me, I can only say that these Soviet Communists were loyal, enthusiastic, and idealistic members of the Party. However, it is entirely possible that these expressed attitudes did not represent their inner convictions, and that the Soviet engineers expressed different opinions of their government and Party when among themselves.
63. Party membership was a basic requirement for a successful career as a Soviet aeronautical engineer. It is possible that an engineer employed in a factory engaged in serial production could remain outside of Party ranks and still hold down a responsible position. However, it would be out of the question for an engineer to be employed in a development plant who was not a member of the Party.
64. Party membership was not a requisite for a worker or foreman who wished to get ahead in his work. However, it was generally true that outstanding workers were encouraged by Party functionaries to become members. Furthermore, Party members were frequently given preferential treatment in the workshops, being assigned to jobs with low production norms and high pay. This last fact, incidentally, was the source of much discontent and open complaints on the part of the mass of workers.
65. Party activities at Plant No. 2 were directed by the Party secretary, who engaged in this work on a full-time basis. Next to the chief designer-director, the Party secretary was the most important personage in the plant. Although the director enjoyed full responsibility for technical control, the Party secretary was empowered to check on the plant's financial administration and, as mentioned before, enjoyed certain plan control functions. The secretary was not only competent in the field of political leadership, but was also familiar with the most intimate technical and administrative operations. He was, in fact, the one person most responsible for daily control functions and was continually in consultation with the director on these matters.
66. The Party secretary was also chief of the plant's Party Committee, which was composed almost entirely of section chiefs. In addition, each of the three main operational divisions in the plant, Designing Office, workshops, and testing installations, had its own Party Committee, or aktiv, as it was often called. Six Soviet engineers made up the Party Committee of the Designing Office.

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67. No Party organ other than the local secretary and committee concerned itself with the management of Plant No. 2. Although it is possible that rayon or oblast committees check up on the activities of plants engaged in serial production, this was not the case at the Upravlencheskiy plant.
68. In addition to plan fulfillment and financial control functions, the Party secretary and his committee were responsible for the publication of the plant's wall newspaper. This journal publicized production breakdowns and mistakes so as to exert moral pressure on culpable persons and to make certain as well that other employees would avoid the same mistakes. Criticism published in this newspaper was limited to plant operations and did not extend to the personal activities of Party members and other employees.
69. The Party Committee, or aktiv, of the Designing Office held regular meetings for all Soviet and German engineers for the purpose of raising the technical knowledge of the former group. Each section within this office gathered twice a week to hear and discuss a lecture on current technical problems delivered on a rotational basis by German and Soviet designers. The Designing Office aktiv made all arrangements for these meetings; they determined the discussion topics, set dates, and procured the necessary speakers. As most of the Soviet designers spoke fluent German, or were required to study the German language, these meetings were conducted in German.
70. The dissemination of technical knowledge by German designers was the primary purpose of these classes or shop meetings. They also served the purpose of encouraging more intensive and efficient operations. In regard to the former point, I might note in passing that the Soviet designers were required not only to fulfill their own assignments in the Designing Office but also were called upon to observe and inquire about the activities of the German engineers there. That is, they were expected to learn from us. Their employment at Plant No. 2 was a training as well as a production assignment.
71. The Party Committee of the Designing Office also convoked weekly meetings for all Soviet Party members in the Designing Office for the purpose of hearing and discussing a lecture on technical problems. These exclusively Party meetings served three purposes: to determine the learning programs of each engineer; to determine an individual's knowledge of operations in his particular section; and to allow all engineers to familiarize themselves with the functions of each section within the Designing Office, and to learn what is required in directing a Designing Office.
72. The plant Party Committee also held political discussion evenings for Party members, arranged political demonstrations on May Day and other major holidays, and played a major role in directing the annual State loan drives. Considering the multiplicity of these compulsory or semi-compulsory extra-curricular activities, it is no wonder that the average Soviet engineer was somewhat tired of these demands on his time and energy. However, the same cannot be said of the members of the various Party Committees within the plant. To them it was a game, a means of making a name for themselves and furthering their careers.
73. There was no apparent conflict within the plant between "Party" and "management", as they were in a sense identical. Management at Plant No. 2 consisted entirely of Party members and the plant's Party Committee consisted almost entirely of managerial personnel. In fact, it is impossible to imagine any conflict between Party and technical directors, as technical directives are in the final analysis Party directives. A plant director fulfilled his Party obligations by meeting his administrative obligations, and instructions to the Party Committee required it to aid and support in any way possible the fulfillment of production plans.

GENERAL COMMENTS ON SOVIET INDUSTRIAL EFFICIENCY

74. There are several factors which, in my opinion, can be considered positive aspects of Soviet industrial efficiency or, if not entirely positive in their effects, at least explain how the Soviet industrial machinery holds together. These can be summarized briefly as follows:

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- (1) Strict controls and disciplinary measures insured that no one could be absent from his place of work without proper permission.
 - (2) Payment of wages according to the norm system guaranteed a minimum output from every worker.
 - (3) The system of bonus payments which applied to engineers and other leading personnel created pressure for a continual increase in efficiency.
 - (4) Regulations requiring payment by the worker for faulty production raised the quality of work by punishing negligence.
 - (5) The system of socialist competition and obligations was also effective in promoting efficiency and increasing production.
 - (6) Careful planning of the various stages of production insured a high degree of utilization of machines and tools.
 - (7) Central industrial planning provided that all enterprises worked toward a common goal.
 - (8) Although planned procurement of production materials was not always successful, it functioned at least 95 percent of the time. This was really an enormous achievement, considering the scope and complexity of Soviet industry.
 - (9) The dual system of controls imposed by the economic ministry and the Party apparatus on industrial enterprises insured in large part the fulfillment of production plans.
 - (10) And, finally, each Soviet engineer and worker realizes that only success in carrying out an assignment can bring him forward. This is another incentive for industrial efficiency.
75. This system of industrial plans and incentives, controls and counter-controls, punishment and rewards, was so well thought out and so complete that we German engineers often wondered what had been forgotten by Soviet planners. Nothing was lacking; everything was considered.
 76. There were several negative aspects of production operations at Plant No. 2 which I believe are characteristic of Soviet industry as a whole. Especially noteworthy was the enormous number of personnel which were assigned to unproductive positions, such as guards, firemen, timekeepers, and certain administrative posts. Despite control measures to the contrary, an enormous number of man-hours was wasted as a result of the bureaucratization of industry.
 77. In at least one important respect, Soviet industry was extremely inflexible. Plant managers were often required to wait an extremely long period of time before they could begin a particular project. This was the result of rigid adherence to their planning procedures. Bureaucratic controls generally prevented an enterprise from undertaking a new project if it were not contained in its annual plan. Plant managers simply had to wait until the following production year, even in matters of great importance.
 78. For example, when the German specialists arrived at Plant No. 2 in 1946, we had almost nothing to do for an entire year. Previous plans had not taken our presence into account; no projects had been drawn up, no materials had been ordered to carry out these projects. Even food was more than normally scarce in Upravlencheskiy, because our presence had not been foreseen. A planned economy is efficient when things go as planned, but it has negative rather than positive effects when unforeseen problems arise--when a plan has to be changed, when a plan is not flexible enough, or is bureaucratically administered.
 79. The Soviet planning system was also the cause of occasional but serious breakdowns in procurement of supplies. Every Soviet manager was interested in cutting down his material requirements to the bone, as this naturally reduced costs and could earn him a bonus for his efforts. A plant's material requirements for a given production year were exactly defined in its annual plan. It often happened that some urgently needed materials were not available, as their necessity had not been foreseen.

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previous year when the annual plan had been drawn up. In such cases, the entire planning machinery stood in the way of obtaining these supplies, as regulations generally prohibited the procurement of materials not called for in the plan.

80. Plant managers faced with such a dilemma generally turned to illegal practices as the solution. In most cases, they were forced to resort to under-the-table arrangements with an enterprise producing the material in question and would be forced to pay two or three times its normal prices. They ran a certain risk in engaging in such practices but not as great as would be imagined. Illegal transactions and bribery were so common in Soviet economic life that everyone had something on his neighbor. No one dared to turn informer for fear that he himself would be betrayed.
81. The technical mediocrity of the average Soviet worker was another major short-coming of Soviet industry. 25X1X
82. Plant No. 2 was still faced with two specific and major problems [redacted] 25X1X
[redacted] The supply of electricity was still critically short, and the transportation facilities servicing the plant were incredibly slow. Operations were anything but smooth during the first years of my employment there. As mentioned previously, plans were chaotic, there was no heat or electricity available, and none of the necessary equipment and materials were on hand. But the situation gradually improved, and by 1949 the plant was operating smoothly. This was particularly true after supplies of limonik [spelling?] --a critical metal used in the production of jet engines--were made available, and after several NENE engines were obtained.
83. Without the support of German aeronautical engineers and information obtained from the United States and England by means of technical journals, espionage, and the purchase of prototype aircraft engines and parts, the Soviet aviation industry would probably have advanced little after 1946. If forced to rely upon its own resources, it might have brought forth new aircraft, but only far behind the United States and England. But now the Soviet Union possesses a modern aircraft industry, thanks to the aid of German specialists and information concerning technological developments in the West.
84. I might note in this connection that the Soviet Union obtained some 15 or so jet engines from the NENE (Rolls-Royce) plant in England through its purchasing agents in Sweden. I do not know if this was an open or covert transaction, but it certainly proved highly beneficial to the operations of Plant No. 2.
85. In this connection, I heard from my Soviet colleagues [redacted] 25X1X
that the Minister of Aviation was removed in 1948 because the Soviet aviation industry had failed to keep pace with modern aircraft developments. According to [redacted] it was charged that the Soviet aviation industry had over-emphasized the production of fighters and light bombers in the medium horsepower range and had failed to develop jet aircraft and, above all, long-range bombers. Khrushchev was the name either of the minister who was removed from his post or that of the succeeding minister.¹ 25X1A
1. [redacted] Comment. As far as is known in this office, Khrushchev was made Minister of Aviation Industry in 1946 and retains that position at the present moment.

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